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**BIBLIOGRAPHY OF TECHNICAL REPORTS
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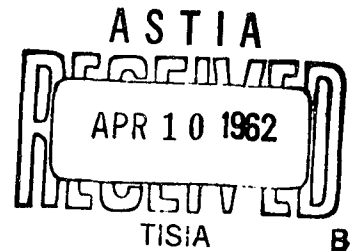
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R. A. Frosch
Director

BIBLIOGRAPHY
OF
TECHNICAL REPORTS
STATUS REPORTS
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CONTRIBUTIONS
1951 - 1960

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FOREWORD

This is a bibliography of the technical reports, status reports, and contributions to scientific journals originating at Hudson Laboratories under Contract N6-ONR-271(35) with the Office of Naval Research and published between 1951 and 1960, inclusive. Blank spaces following the higher numbers of series indicate items whose publication is expected after the closing date of this bibliography. It is planned to bring the bibliography up to date annually through the distribution of new and revised pages.

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1	Report on the preliminary pressure mine sweeper, by W. A. Nierenberg. February 8, 1952. 1 p. SECRET	
2	Three papers, by W. A. Nierenberg: On the performance of a geophone in water. August 17, 1951. 5 p. On the motion of geophones of special geometries in fluids. February 12, 1952. 3 p. Another fluid paradox. February 12, 1952. 2 p. UNCLASSIFIED	
3	Elementary theory of arrays, by R. A. Frosch. February 15, 1952. 9 p. UNCLASSIFIED	
4	Speed control for noisemaker, by D. P. Mitchell. January 22, 1952. 3 p. UNCLASSIFIED	
5	A preliminary investigation of the low frequency transverse modes in a submarine, by Norman S. Shiren and Franklin Pollock. March 10, 1952. 9 p. CONFIDENTIAL	
6	Experiments on the sound output of a submarine, by C. G. Mueller and N. S. Shiren. January 20, 1953. 22 p. SECRET	AD-16 718
7	Transmission tests at USNEF, Eleuthera -Part II, by A. N. Guthrie and H. H. Loar. January 30, 1953. 28 p. SECRET	AD-18 913
8	Conversion of the A Mark 6(b) minesweeping gear to a 30 cycle sound source, by Henry C. Beck and Harry Sonnemann. February 10, 1953. 13 p. CONFIDENTIAL	AD-4926

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9	30 cps sound propagation in shallow water, by G. E. Becker, R. O. Carlson, R. A. Frosch, and H. L. Poss. April 15, 1953. 34 p. CONFIDENTIAL	AD-11 374
10	Signal-to-noise improvement from a filtered linear array, by Franklin Pollock. June 26, 1953. 22 p. UNCLASSIFIED	AD-18 285
11	A preliminary ray computation for the ocean south of Sable Island, by R. A. Frosch. July 15, 1953. 11 p. SECRET	AD-312 961L
12	A preliminary report on sound transmission at San Juan, by R. A. Frosch, A. N. Guthrie, H. H. Loar, and H. L. Poss. October 1, 1953. 39 p. CONFIDENTIAL	AD-21 402
13	15 and 30 cps sound propagation at a location near the entrance to New York Harbor, by G. E. Becker and R. O. Carlson. October 15, 1953. 29 p. CONFIDENTIAL	AD-32 264
14	Shot refraction profiles in the Atlantic Coastal Plain 6 miles east of Ambrose Lightship, by R. O. Carlson and M. V. Brown. November 10, 1953. 31 p. UNCLASSIFIED	AD-22 285
15	Transmission of 30 cps sound in deep water, by H. L. Poss. December 15, 1953. 32 p. CONFIDENTIAL	AD-25 718
16	The far field acoustic wave produced in N parallel liquid layers by point source excitation, by Paul Reichel. January 15, 1954. 25 p. UNCLASSIFIED	AD-26 897
17	Wave generation by point sources, by W. A. Nierenberg. July 7, 1954. 11 p. UNCLASSIFIED	AD-37 857
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20	Proposal for an active sonic underwater early warning device, by J. Evans. May 14, 1954. 76 p. SECRET	AD-38 782
21	A progress report in shallow water research, by W. A. Nierenberg, F. K. Levin, M. Vertner Brown, and I. Tolstoy. June 30, 1954. 19 p. and Appendix. CONFIDENTIAL	AD-35 047
22	Shallow water studies near St. Thomas, V. I., by Ivan Tolstoy, Roberto Frassetto, and Leon P. Goldberg. July 20, 1954. 66 p. CONFIDENTIAL	AD-38 783
23	Transmission of sound from deep to shallow water, by A. N. Guthrie. August, 1954. 20 p. CONFIDENTIAL	AD-38 780
24	Analysis of a general system for the detection of amplitude modulated noise, by E. Parzen and N. S. Shiren. August 2, 1954. 37 p. UNCLASSIFIED	AD-42 753
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27	Preliminary report on the use of a linear vertical array, by Alan Berman. August 20, 1954. 37 p. CONFIDENTIAL	AD-38 776
28	Results of preliminary experiments on well listening on Fire Island, by M. V. Brown and F. Evans. August 10, 1954. 9 p. CONFIDENTIAL	AD-38 781

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30	Behavior of M. A. C. mints on the bottom of the Hudson River, by Roberto Frassetto. August 31, 1954. 7 p. CONFIDENTIAL	AD-44 574
31	Dispersed pulse transmission system, by J. Evans and R. A. Frosch. March 30, 1955. 38 p. CONFIDENTIAL	AD-68 669
32	Some outstanding questions and suggestions in shallow water propagation theory and experiment, by Ivan Tolstoy. June 29, 1955. 25 p. CONFIDENTIAL	AD-75 089
33	Optimum consistent estimates of the spectrum of a stationary time series, by E. Parzen. August 4, 1955. 74 p. UNCLASSIFIED	AD-81 243
34	Seismic refraction profiles on the continental shelf south of Bellport Coast Guard Station, Long Island, New York, by M. V. Brown, J. Northrop, R. Frassetto, and L. H. Grabner. August 19, 1955. 19 p. UNCLASSIFIED	AD-75 918
35	Underwater sound from the USS NAUTILUS, by D. P. Mitchell, H. Sonnemann, H. Schimmel, and M. Tannenbaum. September 1, 1955. 12 p. SECRET	AD-312 962L
Supplement to 35	Underwater sound from the USS NAUTILUS-Supplement, by D. P. Mitchell, H. Schimmel, S. Shein, H. Sonnemann, and M. Tannenbaum. April 4, 1956. 14 p. SECRET	AD-312 963L
36	CANCELED	
37	An electrodynamic source for low frequency underwater sound, by P. E. Weber and M. A. Hall. December 15, 1955. 42 p. UNCLASSIFIED	AD-134 670

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40	The Bermuda-New England seamount arc, by John Northrop, R. A. Frosch, and Roberto Frassetto. April 9, 1956. 25 p. CONFIDENTIAL	AD-99 757
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43	Preliminary studies on phase relationships in ambient noise, by Alan Berman. February 23, 1956. 42 p. SECRET	AD-312 965L
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45	Line spectrum of the NAUTILUS, by D. P. Mitchell, H. Sonnemann, H. Schimmel, and M. Tannenbaum. May 22, 1956. 44 p. SECRET	AD-312 966L
46	Ray theoretical calculations, by Julian Stone. May 21, 1956. 43 p. UNCLASSIFIED	AD-127 264
47	Ray tracing on the IBM 650, by L. Gardner. June 4, 1957. v. p. UNCLASSIFIED	AD-215 643
48	CANCELED	
49	Report on deep water studies of the directional properties of ambient noise-Part I, by A. Berman, H. C. Beck, H. Sonnemann, and H. G. Berman. March 26, 1957. 101 p. CONFIDENTIAL	AD-140 332

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50	The detection of nuclear-powered submarines by nonacoustic methods, by A. Berman and H. A. Miranda, Jr. December 12, 1957. 47 p. CONFIDENTIAL	AD-312 317
51	Preliminary report on the correlation of CW signals at large hydrophone separations, by A. Berman, C. S. Clay, R. A. Frosch, and H. B. Sherry. April 25, 1957. 31 p. SECRET. Addendum, by Robert A. Frosch. September 24, 1957. 3 p. SECRET	AD-312 967L
52	CANCELED. See Contribution 29	
53	Stability measurements of telephone lines for the transmission of low frequency CW signals, by A. Berman, H. G. Berman, G. T. Holub, and R. A. Frosch. August 27, 1957. 44 p. SECRET	AD-312 968L
54	Tracking a target at sea utilizing correlation of signals from widely spaced hydrophones, by H. B. Sherry. October 15, 1957. 22 p. SECRET	AD-312 969L
55	Correlation of signals from a submarine at several spacings of detectors, by C. S. Clay, H. B. Sherry, M. Blaik, and L. Tyson. June 25, 1958. 25 p. SECRET	AD-305 934
56	The transmission of [acoustic] data over telephone lines, by A. Berman, G. Fisher, and H. B. Sherry. June 15, 1958. 17 p. SECRET	AD-305 935
57	Tracking a sound source using correlation technique, by A. Berman, C. S. Clay, M. Klerer, H. B. Sherry, and J. Stone. June 15, 1958. 31 p. SECRET	AD-305 936L
58	Fluctuations of low frequency CW sound over very long ranges in the deep ocean, by A. Berman, C. S. Clay, R. A. Frosch, and H. B. Sherry. January 12, 1959. 22 p. SECRET	AD-305 937L

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60	Further remarks on shallow-water wave guides, by I. Tolstoy. August 31, 1958. 10 p. UNCLASSIFIED	AD-212 534
61	A computation procedure for the scattering of sound from a prolate spheroid, by David Sternberg. December 3, 1958. 41 p. UNCLASSIFIED	AD-229 474
62	The effect of multipath interference in Doppler navigation, by Julian Stone. January 15, 1959. 18 p. UNCLASSIFIED	AD-212 536
63	The computation of associated Legendre functions of integral order and their derivatives, for arguments greater than one, by David Sternberg. May 4, 1959. 55 p. UNCLASSIFIED	AD-229 475
64	On the possibility of radar reflections from submerged objects, by B. P. Fabricand, B. J. Block, C. S. Clay, S. Goldberg, and P. Schad. December 31, 1958. 8 p. CONFIDENTIAL	AD-305 905
65	A polarity coincidence multiplier for detection of signals in noise, by Bernard M. Rosenheck. March 15, 1959. 18 p. UNCLASSIFIED	AD-214 850
66	CW acoustic propagation studies in the deep ocean, by Alan Berman and H. B. Sherry. May 15, 1959. 96 p. CONFIDENTIAL	AD-316 407
67	An estimate of turbulent velocities in the ocean, by T. E. Pochapsky. March 1, 1959. 21 p. UNCLASSIFIED	AD-214 881
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73	A detailed investigation of the absorption by water of electromagnetic radiation, by B. P. Fabricand. August 15, 1957. 14 p. UNCLASSIFIED	AD-215 630
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77	A summary of weight-release and deballasting mechanisms used at Hudson Laboratories, by Henry C. Beck. June 1, 1959. 39 p. UNCLASSIFIED	AD-228 546
78	Propagation of sound between a fixed source and a fixed receiver in the ocean, by C. S. Clay, M. Blaik, and H. B. Sherry. October 15, 1959. 24 p. UNCLASSIFIED	AD-233 435
79	A low-frequency electronic filter, by Morton Lomask. August 15, 1959. 15 p. UNCLASSIFIED	AD-233 436
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82	TITLE CLASSIFIED, by H. Miranda and P. Rooney. December 15, 1959. 45 p. CONFIDENTIAL	AD-318 640
83	An instrumented neutral float, by T. E. Pochapsky. September 1, 1959. 14 p. UNCLASSIFIED	AD-233 437
84	A device for measuring small pressure differ- ences, by T. E. Pochapsky. September 1, 1959. 17 p. UNCLASSIFIED	AD-236 094
85	Hudson Laboratories hydrophone calibration facilities, by H. Sonnemann and R. McGunigle. May 30, 1960. 27 p. UNCLASSIFIED	AD-252 294
86	Review of three classic problems in hydro- dynamic stability, by Donald H. Koppel. February 15, 1960. 105 p. UNCLASSIFIED	AD-240 897
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90	Temperature measurements in the ocean near Eleuthera, by T. Arase. September 15, 1960. 16 p. UNCLASSIFIED	AD-250 930

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Part I. Operational and environmental factors. October 11, 1957. 78 p. SECRET	AD-325 788L
Part II. Acoustic survey. Volume One-Text. November 15, 1958. 66 p. SECRET	AD-319 035L
Part II. Acoustic survey. Volume Two-Figures. November 15, 1958. 178 p. SECRET	AD-321 248L

* Project MEDEA was a cooperative survey sponsored by the Office of Naval Research and coordinated by Hudson Laboratories.

PART III
STATUS REPORTS

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[1]	November 23, 1951. E. T. Booth, Director. 10 p. SECRET	
	Progress report. E. T. Booth, Director. Jan- uary 10, 1952. 17 p. SECRET	TIP S-2179
	Progress report. E. T. Booth, Director. July 1, 1952. 21 p. SECRET	
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	Progress report. September 16, 1952-Decem- ber 31, 1952. E. T. Booth, Director. Jan- uary 15, 1953. 28 p. SECRET	AD-18 346
	Progress report. January 1, 1953-March 31, 1953. E. T. Booth, Director. April 30, 1953. 27 p. SECRET	AD-10 217
[2]	April 1, 1953-September 30, 1953. W. A. Nier- enberg, Director. October 1, 1953. 27 p. SECRET	AD-36 724
[3]	October 1, 1953-March 31, 1954. W. A. Nier- enberg, Director. April 12, 1954. 35 p. SECRET	AD-33 271
[4]	April 1, 1954-September 30, 1954. A. N. Guth- rie, Director. December 2, 1954. 41 p. SECRET	AD-62 226
[5]	October 1, 1954-March 31, 1954. A. N. Guth- rie, Director. May 16, 1955. 35 p. SECRET	AD-75 084
Special Report	I. Progress from April 1, 1955-September 30, 1955. II. Summary of progress before April 1, 1955. A. N. Guthrie, Director. October 24, 1955. 174 p. SECRET	AD-83 340

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[6]	October 1, 1955-June 30, 1956. A. N. Guth- rie, Director. June 29, 1956. 40 p. SECRET	
[7]	July 1, 1956-December 31, 1956. R. A. Frosch, Director. January 2, 1957. 54 p. SECRET	
8	January 1, 1957-August 31, 1957. R. A. Frosch, Director. October 28, 1957. 47 p. SECRET	
9	September 1, 1957-August 31, 1958. R. A. Frosch, Director. November 15, 1958. 91 p. SECRET	AD-305 906
10	September 1, 1958-August 31, 1959. R. A. Frosch, Director. October 10, 1959. 86 p. SECRET	AD-318 100L
11	September 1, 1959-August 31, 1960. R. A. Frosch, Director. November 25, 1960. 64 p. SECRET	AD-322 828

PART IV
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NUMBER	DESCRIPTION
1	Northrop, J. A bathymetric profile across the Hudson Submarine Canyon and its tributaries. Journal of Marine Research. 12(2):223-32. December 1953.
2	Northrop, J. Bathymetry of the Puerto Rico Trench. American Geophysical Union. Transactions. 35(2):221-5. April 1954.
3	Tolstoy, I. Note on the propagation of normal modes in inhomogeneous media. Journal of the Acoustical Society of America. 27(2):274-7. March 1955.
4	Poss, H. L. Highly selective low-frequency tuning-fork filter. Review of Scientific Instruments. 25(3):299-300. March 1954.
5	Berman, A., A. J. Saur, and B. McMahon. Mercury contact slip rings for low-level signal applications. Review of Scientific Instruments. 25(4):399. April 1954.
6	Carlson, R. O. and M. V. Brown. Seismic-refraction profiles in the submerged Atlantic Coastal Plain near Ambrose Lightship. The Geological Society of America Bulletin. 66(8):969-76. August 1955.
7	Northrop, J. and R. A. Frosch. Seamounts in the North America Basin. Deep-Sea Research. 1(4):252-7. 1954.
8	Levin, F. K. Refraction shooting in shallow water. U. S. Naval Research Laboratory, Harbor Defense and Countermeasures Bulletin. 9:73-6. March 1955. CONFIDENTIAL
9	Parzen, E. and N. S. Shiren. Analysis of a general system for the detection of amplitude-modulated noise. Journal of Mathematics and Physics. 35(3):278-88. October 1956.
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11	Guthrie, A. N. and M. C. Rinehart. Determination of bottom characteristics by reflection. U. S. Navy Journal of Underwater Acoustics. 5(3):184-90. July 1955. CONFIDENTIAL

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NUMBER	DESCRIPTION
12	Tolstoy, I. Dispersion and simple harmonic point sources in wave ducts. Journal of the Acoustical Society of America. 27(5):897-905. September 1955.
13	Frassetto, R. and J. Northrop. Virgin Islands bathymetric survey. Deep-Sea Research. 4(2):138-46. 1957.
14	Parzen, E. On consistent estimates of the spectral density of a stationary time series. National Academy of Sciences. Proceedings. 42(3):154-7. March 1956.
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21	Tolstoy, I. Resonant frequencies and high modes in layered waveguides. Journal of the Acoustical Society of America. 28(6):1182-92. November 1956.
22	Tolstoy, I. and Eugene Usdin. Wave propagation in elastic plates: Low and high mode dispersion. Journal of the Acoustical Society of America. 29(1):37-42. January 1957.
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24	Berman, A. and C. S. Clay. Theory of time-averaged-product arrays. Journal of the Acoustical Society of America. 29(7):805-12. July 1957.
25	Northrop, J., M. Blaik, and R. Frassetto. Bathymetry of the Gibbs Hill area, Bermuda. Deep-Sea Research. 5(4):290-6. 1959.
26	Blaik, M., J. Northrop, and C. S. Clay. Some seismic profiles onshore and offshore Long Island, New York. Journal of Geophysical Research. 64(2):231-9. February 1959.

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31	Berman, A., H. G. Berman, J. E. Pinning, and H. B. Sherry. An experimental study of an eight-element TAP array. U. S. Navy Journal of Underwater Acoustics. 9(2):283-92. April 1959. CONFIDENTIAL
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33	Northrop, J. and A. Berman. Correlation of some SOFAR arrivals in the western North Atlantic. Presented at the Fifty-seventh Meeting of the Acoustical Society of America, Ottawa, May 14-16, 1959. Abstract published in the Journal of the Acoustical Society of America. 31(6):838. June 1959.
34	Tolstoy, I. Resonances due to hidden degrees of freedom in stratified elastic media. Symposium on Non-Homogeneity in Elasticity and Plasticity, Warsaw, September 2-9, 1958. Proceedings. New York, Pergamon Press, 1959. :373-82.
35	Guthrie, A., M. Lomask, A. Saenger, and J. Shaffer. Transmission of low-frequency CW signals in the deep ocean. U. S. Navy Journal of Underwater Acoustics. 9(4):667-76. October 1959. CONFIDENTIAL
36	Clay, C. S. and M. Blaik. Propagation of sound originating in the water and detected in the ground. Presented at the Fifty-seventh Meeting of the Acoustical Society of America, Ottawa, May 14-16, 1959. Abstract published in the Journal of the Acoustical Society of America. 31(6):838. June 1959.

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38	Clay, C. S. Propagation of narrow band-limited noise in a layered wave guide. Journal of the Acoustical Society of America. 31(11):1473-9. November 1959.
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40	Schimmel, H. Enhanced correlator output through optimum delay-line processing. Institute of Radio Engineers. Proceedings 47(6):1154. June 1959.
41	Berman, A., C. S. Clay, R. A. Frosch, and H. B. Sherry. Fluctuations of low-frequency harmonic signals over very long transmission paths in the deep ocean. U. S. Navy Journal of Underwater Acoustics. 9(3):503-8. July 1959. CONFIDENTIAL
42	Berman, A., M. Klerer, H. B. Sherry, and J. Stone. Determination of the position and track of a moving simple harmonic source in the ocean. U. S. Navy Journal of Underwater Acoustics. 9(3):509-13. July 1959. CONFIDENTIAL
43	Tolstoy, I. Modes, rays and travel times. Journal of Geophysical Research. 64(7):815-21. July 1959.
44	Frassetto, R. A preliminary survey of thermal microstructure in the Strait of Gibraltar. Deep-Sea Research. 7(3):152-62. 1960.
45	Stone, J. Performance of arrays in an inhomogeneous medium. U. S. Navy Journal of Underwater Acoustics. 9(4):729-47. October 1959. CONFIDENTIAL
46	Lomask, M. and R. Frassetto. Acoustic measurements in deep water using the bathycaph. Journal of the Acoustical Society of America. 32(8):1028-33. August 1960.
47	Saenger, A. and M. Lomask. Ambient noise in a deep inland lake. Journal of the Acoustical Society of America. 32(6):878-83. July 1960.

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